ENVIRONMENTAL ASSESSMENT

Cross Bar Cooperative Management Area:
Mesquite, Salt Cedar, and Cholla Cactus Eradication Project

U.S. Department of the Interior
Bureau of Land Management
Amarillo Field Office
Amarillo, TX

DOI-BLM-NM-060-2011-02

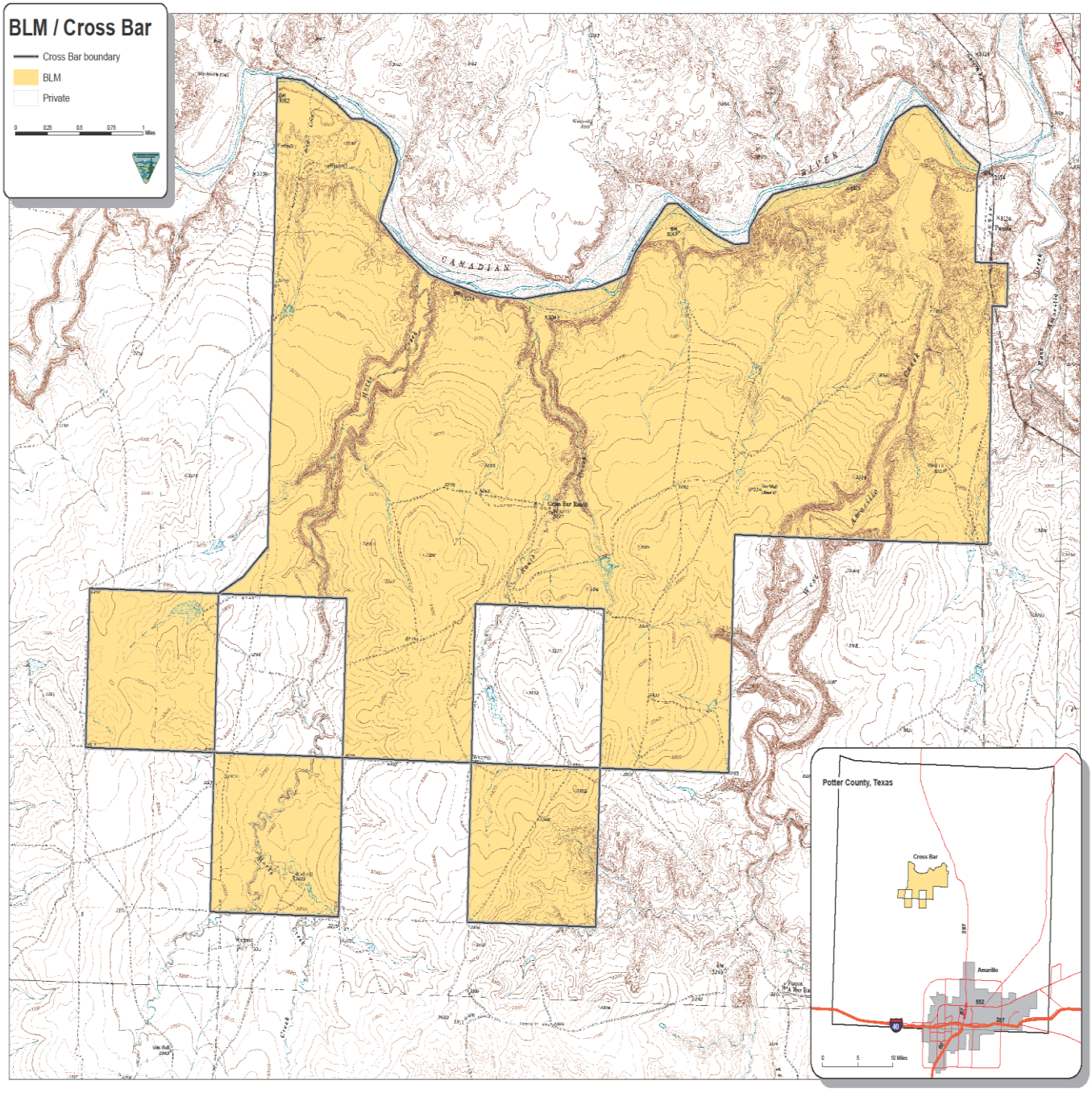

Fig. 1 Crossbar CMA Property: Proposed area is highlighted in yellow. The surrounding areas are privately owned. The eastern most creek is W. Amarillo Creek which maintains a perennial stream. The Canadian River is our northern most boundary which is owned and maintained by the State of Texas and the NPS.

A. Purpose and Need for the Proposed Action

The purpose of this proposed action is to decrease percent species composition, as measured by crown cover, of mesquite (*Prosopis* spp.), salt cedar (*Tamarix chinensis*) and cholla cactus (*Opuntia* spp.) within the sprayed areas by 80 percent to 90 percent on approximately 12,000 acres. The immediate goal of the treatment is to create suitable habitat for the reintroduction of the black-tailed prairie dog (*Cynomys ludovicianus*) and the black-footed ferret (*Mustela nigripes).* These treatments will be administered via cut-stump treating. The treatment is also designed to study the effects of mesquite treatment on birds in a short grass prairie environment. With the decrease in mesquite cover, salt cedar, and cholla cactus, there will be some increase in the basal cover of the key herbaceous species. Range ecological status is expected to improve on all range sites within the treatment areas as the invasive woody species densities will be drastically reduced. An improvement will likely increase the populations of mule deer (*Odocoileus hemionus*) and pronghorn antelope (*Antilocapra americana).* This spraying is part of a multi-year project to restore the Cross Bar to the ecological conditions of a short-grass prairie that existed prior to the turn of the last century (1900).

B. Conformance with Land Use Planning and other Environmental Documents

The BLM, as a Federal agency within the Department of the Interior, is required to conduct land use planning and development according to the requirements of the Federal Land Policy Management Act of 1976, as amended. The removal of mesquite, salt cedar, and cholla cactus is addressed in the BLM land use plan. Furthermore, the BLM is dedicated to assist the US Fish and Wildlife Service where necessary. Removing these invasive species aids in the development of the necessary habitat for the endangered species, the black-footed ferret. This proposed action complies with the Resource Management Plan (2000) for the Cross Bar Cooperative Management Area. This EA is tiered to the Federal Land Policy Vegetation Treatments Using Herbicide on Bureau of Land Management Lands in 17 Western States Programmatic Impact Statement (PEIS; BLM 2007).

1. Ecological Site Description:

   Natural Resource Conservation Service (MLRA 77C) Southern High Plains, Southern Part (see attached)

C. Statutes and Regulations

The following laws, acts, plans, manuals, and policies provide a foundation for weed management by the BLM:

1. Federal Land Policy and Management Act of 1976, as amended, Public Law 94-579 (43 U.S.C. 1701 et seq.);
2. Public Rangelands Improvement Act of 1978, Public Law 95-514 (43 U.S.C. 1901 et seq.);
3. Reclamation Act of 1902, 32 Stat. 388 (43 U.S.C. 391);
4. The "Carlson-Foley Act," Public Law 90-583 (43 U.S.C. 1241 et seq.), providing for the control of noxious plants on lands under the control or jurisdiction of the Federal Government;
5. Federal Noxious Weed Act of 1974, Public Law 93-629, as amended (7 U.S.C. 2801 et seq.);
6. Halogeton Glamoratus Control Act, 66 Stat. 597 (7 U.S.C. 1651 et seq.), providing for the control of halogeton on lands under the Department's jurisdiction;
7. Endangered Species Act, Public Law 93-205, as amended by Public Law 100-478 (16 U.S.C. 1531, et seq.);
8. National Park Service Organic Act, 39 Stat. 535, as amended (16 U.S.C. 1 et seq.); and
9. Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136 et seq.).

In addition to the aforementioned authorities, the following Public Laws, Executive orders, Federal regulations, and the Departmental Manual influence application of IPM for the control of undesirable plants.

10. National Environmental Policy Act (NEPA), Public Law 91-190 as amended (42 U.S.C. 4321 et seq.);
11. The Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500, as amended;
12. Noxious Weed Regulations, 7 CFR Part 360;
13. Pesticide Programs, 40 CFR Subchapter E;
14. Interagency Cooperation, 50 CFR Part 402;
15. Departmental Manual, Pesticide Use Policy, 517 DM 1;
16. Executive Order 11514--Protection and Enhancement of Environmental Quality, as amended by Executive Orders 11541 and 11991 (March 5, 1970);
17. Executive Order 11738--Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans (September 10, 1973); and
18. Executive Order 11987--Exotic Organisms (May 24, 1977)

1. PROPOSED ACTION AND ALTERNATIVES

A. Alternative 1: No Action

Under this alternative, no treatment using herbicide and fertilizer would occur.

B. Alternative 2: Proposed Action

The Proposed Action is to eradicate or control the infestation of unwanted plants wherever found and control their spread. BLM staff would operate under federally granted herbicide applicator licenses. All cut/stump treatments and methods would be BLM approved. Remedy Ultra and Herbimax (adjuvant) are BLM approved in the (2007 Herbicide EIS). Standard operating procedures will be followed and are found in Appendix A. Remedy Ultra

is believed to be the most effective stump treatment of mesquite spp., salt cedar, and cholla cactus.

C. Stipulations and Conditions of Approval

In addition to the SOP's in the 2007 EIS, the following measures and conditions of approval would be applied to all herbicide applications at the BLM under this EA:

1) All BLM-approved herbicides and adjuvants would be applied according to their label instructions. The instructions include effective application rates for specific noxious weed species, and non-treatment buffers around water bodies and water sources.

2) The applicator will follow the design described in the Scope of Work (SOW).

3) The applicator must have all appropriate licenses and permits to purchase and apply herbicides and adjuvants, and operate needed equipment at the CMA.

4) The applicator will manage and store all herbicide and adjuvant products and equipment at an approved location.

5) The herbicide and adjuvant application will cover each section on the CMA and will be conducted annually during the early spring through early summer season, and winter. Prior to initiating application, the applicator will contact the appropriate BLM representative to insure that the appropriate areas of application are identified.

6) Applications in wetlands and riparian zones will use appropriate herbicide-free buffer zones for herbicides not labeled for aquatic use based on risk assessment guidance, with minimum widths of 25 feet for applications using vehicles and 10 feet for hand spray applications.

7) Open bodies of water (rivers, streams, ponds, stock watering facilities, water wells for example) will be buffered from treatment in accordance with herbicide and adjuvants label directions for the specific target species to minimize impacts.

8) Post-treatment monitoring by BLM CMA staff will be conducted to evaluate the effectiveness of treatments.

9.) Every cut plant will be left to dry in the heat. After drying, a prescribed fire will be applied through each section to reduce the decedent fuel level (dead trees). Some mesquite will, however; be moved via utility vehicle to build a visual obstruction for prairie dog control and to construct small quail habitats. If heavy equipment is necessary (i.e. backhoe or skid steer) clearance must be given by the zone archeologist. This process will be evaluated by the zone archeologist for approval.

9) If archeological materials such as chipped stone tools and debris, pottery, bone, historic ceramics, glass, metal, or building structures become exposed; **stop work at that spot immediately and contact the BLM Archeologist at (918) 621- 4187**.

Resources	Not Present On Location	No Impact	Potentially Impacted	Mitigation necessary	Comments included in EA text	BLM Evaluator Initial & Date
Riparian Zones/Wetlands	☐	☐	☐	☐	☐	
Wildlife	☐	☐	☐	☐	☐	
Special Status, T & E Species	☐	☐	☐	☐	☐	
Cultural or Historical	☐	☐	☐	☐	☐	
American Indian Religious Concerns	☐	☐	☐	☐	☐	
Paleontology	☐	☐	☐	☐	☐	
Air Quality	☐	☐	☐	☐	☐	
Water Quality (Surface/Ground)	☐	☐	☐	☐	☐	
Soils (Watershed/Hydrology)	☐	☐	☐	☐	☐	
Floodplains	☐	☐	☐	☐	☐	
Caves and Karst	☐	☐	☐	☐	☐	
Hazardous or Solid Waste Materials	☐	☐	☐	☐	☐	
Mineral Resources	☐	☐	☐	☐	☐	
Farmlands, Prime or Unique	☐	☐	☐	☐	☐	
Livestock Grazing	☐	☐	☐	☐	☐	
Wild Horse and Burros	☐	☐	☐	☐	☐	
Vegetation, Forestry	☐	☐	☐	☐	☐	
Invasive, Non-native Species	☐	☐	☐	☐	☐	
Visual Resources	☐	☐	☐	☐	☐	
Recreation	☐	☐	☐	☐	☐	
Transportation and Access	☐	☐	☐	☐	☐	
Land Tenure, ROW, Other Uses	☐	☐	☐	☐	☐	
Environmental Justice	☐	☐	☐	☐	☐	

Table 1: Potentially impacted resources

2. DESCRIPTION OF AFFECTED ENVIRONMENT

This section describes the environment that would be affected by implementation of the alternatives described in Section 2. Aspects of the affected environment described in this section focus on the relevant major resources or issues. Certain critical environmental components require analysis under BLM policy. These items are included below in Table 2. Following the table, only the aspects of the affected environment that are potentially impacted are described.

A. General Topography

The treatment encompasses the entire area of the Cross Bar CMA where these invasive/undesirable plant species are found. The area is comprised of rolling topography with some minor draws running through the area. Precipitation averages 19 inches annually with the majority arriving as spring and fall thundershowers. Soils are dominated by clay/loam types. The treatment areas fall within Visual Resource Management (VRM) Class IV.

B. Riparian Zones and Wetlands

Several natural wetlands occur on the CMA. These wetlands include Horse Creek, Ranch Creek, and West Amarillo Creek. Both Horse Creek and Ranch Creek remain ephemeral and only hold water and have water movement during significant thunderstorms or other precipitation events. West Amarillo Creek contains within it an perennial creek. On the northern boundary of the CMA lies the Canadian River. While stream activity is low, this river is perennial and is used for hunting, fishing and recreational use. The Canadian River is managed by the State of Texas. (Figure 2).

C. Wildlife

Wildlife habitats on the CMA are comprised of gently sloping pastureland primarily consisting of a vegetative cover composed of blue grama grass (*Bouteloua gracilis*), buffalo grass (*Bouteloua dactyloides*), sideoats grama (*Bouteloua curtipendula*), little bluestem (*Schizachyrium scoparium*), vine mesquite (*Panicum obtusum*) and other herbaceous plant species. Species of Texas's wildlife common to this area that one would expect to encounter would include, but not limited to, coyotes (*Canis latrans*), bobwhite quail (*Colinus virginianus*), mourning doves (*Zenaida macroura*), scissor-tailed flycatchers (*Tyrannus forficatus*), cottontail rabbits, mule deer, white-tailed deer, and pronghorn antelope. Other species of insects, mammals, birds, reptiles and amphibians which would occur are too numerous to list in this document.

D. Special Status, Threatened & Endangered Species

The group of species referred to here, and in the attached biological evaluation, as special status species (SSS) includes Federal and state listed threatened or endangered plant or animal species, species proposed for listing and species under review by the U. S. Fish and Wildlife Service (FWS) or the Texas Parks and Wildlife Department (TPWD). The authority for this policy and guidance regarding the evaluation of SSS comes from the Endangered

Species Act of 1973, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; and Department of Interior, Bureau of Land Management, Special Status Species Management (Manual 6840). There are no Wilderness Study Areas (WSA's) or Special Management Areas (SMA's) within the subject spray area.

E. Cultural or Historical

No significant impact.

F. American Indian Religious Concerns

There are no Native American Tribes in Texas to consult with.

G. Paleontology

There are no areas of significance within the treatment area.

H. Air Quality

Not Applicable

I. Water Quality: Surface and Groundwater

1. Surface Water

No riparian areas or wetlands have been identified as threatened within the project area where herbicide and adjuvants would be applied, and the proposal does not occur on or cross Army Corps of Engineer jurisdictional waters.

2. Groundwater

The Ogallala Water Aquifer is identified as underlying Potter County, TX.

J. Soils – Watershed and Hydrology

Soils are dominated by clay/loam types.

K. Floodplains

The CMA is located outside of city limits and is not located in a floodplain. There are, however; tributaries that drain into the Canadian River. These tributaries will not be affected by the proposed actions.

L. Caves and Karst

No known cave or karst areas exist within the project area.

M. Hazardous or Solid Waste Materials

BLM Instruction Memorandum WO-93-344 requires that all NEPA documents list and describe any hazardous and/or extremely hazardous substances that would be produced, used, stored, transported or disposed of as a result of the proposed project. As a BLM facility, the CMA must comply with the Federal Facility Compliance Act. This act essentially requires the facility to be in compliance with all environmental laws. The CMA is regularly audited as part of the BLM's Compliance Assessment -Safety, Health, and Environment (CASHE) Program. All findings, including those classified under the hazardous waste (HWGEN) category are required to be corrected.

N. Mineral Resources

There are no mineral resources at the CMA to consider for impact analysis.

O. Farmlands, Prime or Unique

No farmlands, prime or unique are located within this project area.

P. Livestock Grazing

Livestock grazing does not occur on the CMA.

Q. Wild Horse and Burros

There are no wild horse or burro programs in effect on the CMA.

R. Vegetation and Forestry

The natural vegetation is a mixture of short grass species and shrub species which is distinct to the Southern Great Plains. Vegetation on, and surrounding the CMA is derived from gently sloping pastureland with a vegetative cover composed of buffalo grass and blue grama, and dense stands of mesquite and cholla cactus.

S. Invasive and Non-native Species

Honey Mesquite, cholla cactus, salt cedar, bull thistle and various other grass and woody species occur on the CMA. However, the most invasive species are the species that are being targeted in this proposal.

T. Visual Resources

The Proposed Action would be most visible from the Canadian River. Recreationists utilize this river and would be able to see the northern boundary of the CMA. Highway 287N is

approximately 7 miles east of the eastern most boundary of the CMA. This highway is used by all manner of vehicles.

U. Recreation

Recreational activities are conducted at the CMA. They include, hiking, photography, walking and hunting. However, these activities are limited to approximately 350 individual visit days per year.

V. Transportation and Access

The only roads at the CMA are two-track pasture roads in which access is restricted via locked gates. The CMA roads are not accessible to the public.

W. Land Tenure, Rights-of-Way (ROWs), Other Realty Uses, Issues, or Concerns

ROW's are provided to adjacent farmers. There are no other realty concerns.

X. Environmental Justice

This annual herbicide and adjuvant application project would be conducted on the existing CMA which is absent of minority or impoverished areas.

3. ENVIRONMENTAL CONSEQUENCES: DIRECT AND INDIRECT EFFECTS

A. Alternative 1: No Action

Not applying herbicide and adjuvant to the CMA would allow mesquite, salt cedar, and cholla to continue to invade the property. These plants are invasive and continue to increase in their densities. If no action is taken the herbaceous plant density will continue to decline. Further, if no action is taken to eliminate these plant species, the black-footed ferret will not be able to be reintroduced to the CMA.

B. Alternative 2: Proposed Action

Alternative 2, the Proposed Action would effectively protect the CMA from unwanted plant species while sustaining a lucrative wildlife habitat for all species occurring on the CMA, including the planned introduced species. Benefits of the Proposed Action are an increase in sustainable ***natural*** wildlife forage and shelter and decreased erosion and resultant improved watershed conditions. An alternative to this proposed action would be to grub the mesquite with heavy equipment. Although grubbing is feasible and would have a relatively parallel result, it would disturb the soil to a much greater extent than would cutting and stump treating.

1. General Topography

Annual application of Remedy Ultra and cutting the target species is not anticipated to have a significant impact on the general topography of the CMA.

2. Riparian Zones and Wetlands

Annual application of Remedy Ultra at the CMA should not adversely impact any wetlands or riparian zones.

3. Wildlife

The species composition and population levels of the species of wildlife using these lands would go through seasonal and year-to-year fluctuations directly related to vegetation condition factors on the facility. These adjustments would be exhibited by the wildlife populations present. Further, the actions should improve habitat and increase wildlife species.

4. Special Status, Threatened & Endangered Species

A Biological Evaluation (BE) was completed in February 2010 for the use of Remedy Ultra, and resulted in a biological determination of "No Effect" for the biological resources discussed in the BE. No further biological evaluation is necessary regarding this project at this location.

5. Cultural or Historical

The proposed action would have no affect on any cultural or historical artifacts. If archeological materials such as chipped stone tools and debris, pottery, bone, historic ceramics, glass, metal, or building structures are exposed; all surface disturbing activities would cease at that spot immediately and the BLM and SHPO would be contacted.

6. Native American Indian Religious Concerns

Not Applicable. There are no Native American Tribes in the State of Texas.

7. Paleontology

The proposed action would have no affect on any paleontological findings.

8. Air Quality

Following label directions for the application of the herbicide, spraying would not be conducted when winds are above 10-mph (as per label instructions). There would be no adverse impact to air quality as a result of this project.

9. Water Quality: Surface and Groundwater

A. Surface Water

Remedy Ultra can be used on seasonally dry wetlands and can be safely applied near surface water when an appropriate buffer zone is implemented, and is nonvolatile; staying where it is sprayed. The Remedy Ultra label and BLM policy will be followed to prevent surface water contamination.

B. Groundwater

Annual application of Remedy Ultra would not adversely affect the groundwater as only the exposed stump of the invasive plant species will be treated.

10. Soils

Since the application will be via cut/stump treatment the amount of herbicide will be less than any other available applications. The soils in the CMA will not be affected. The Remedy Ultra label and BLM policy will be followed to prevent soil contamination.

11. Floodplains

No effect. The Remedy Ultra label and BLM policy will be followed to prevent floodplain damage and contamination.

12. Caves and Karst

No known cave or karst areas exist within the project area.

13. Hazardous or Solid Waste Materials

There are no significant direct or indirect effects regarding annual application of Remedy Ultra regarding hazardous or solid waste materials for the CMA. The applicator would manage all the products for this project, and store the products and product applying equipment at a BLM approved location.

14. Mineral Resources

Not Applicable.

15. Farmlands, Prime or Unique

Since there are no prime or unique farmlands in the vicinity of this project, annual application of Remedy Ultra would not have an impact on any prime or unique farmlands within the area of the BLM.

16. Livestock Grazing

Livestock grazing does not occur on the CMA.

17. Wild Horse and Burro Grazing

No wild horse and burros occur on the CMA.

18. Vegetation and Forestry

Following label application instructions, there would be no direct or indirect effect to the vegetation and forestry of the area outside of the area at the CMA.

19. Invasive and Non-native Species

Remedy Ultra is target specific and will neither increase nor decrease non target herbaceous, invasive or non native plant species. Remedy Ultra would be beneficial to control and manage the undesirable plant species for this specific project. In the long term, the removal of mesquite, salt cedar, and cholla cactus will provide more open foraging ground for all

native wildlife species. The removal of such plant species is expected to aid in the sustainability and increase in both mule deer and pronghorn antelope populations.

20. Visual Resources

The proposed action would not be out of character with current and past land use patterns.

21. Recreation

There would be no direct or indirect effects to recreation at the CMA.

22. Transportation and Access

There are no transportation and access concerns associated with the annual application of Remedy Ultra at the CMA.

23. Land Tenure, Rights-of-Way (ROWs), Other Realty Uses, Issues, or Concerns

There are no ROW's or other realty concerns associated with the annual application of Remedy Ultra at the CMA.

24. Environmental Justice

There are no environmental justice concerns with the annual application of Remedy Ultra at the CMA.

4. CUMULATIVE IMPACTS

It is not anticipated that there would be any cumulative impacts to the CMA or surrounding area. Major benefits of the proposed treatment are eradication of undesirable plant species and decreased erosion and improved watershed conditions, wildlife habitat, etc.

MONITORING, MITIGATION MEASURES, AND BEST MANAGEMENT PRACTICES

The effectiveness of this proposed application will be monitored every year. Mitigation measures necessary regarding implementation of this project include following all label instructions for both Remedy Ultra and adjuvants are followed.

5. BLM TEAM MEMBERS

NAME	TITLE	ORGANIZATION
Leslie Theiss	Field Manager	BLM, AmFO, Amarillo, TX
Roger Cumpian	Weeds Coordinator	BLM, NM State Office
Adrian Escobar	Natural Resource Specialist	BLM, AmFO, Amarillo, TX
George Thomas	Senior Wildlife Biologist	BLM, OFO, Tulsa
Rick Fields	Zone Archeologist	BLM, OFO, Tulsa

6. REFERENCES

1969 National Environmental Policy Act (as amended):
http://ceq.hss.doe.gov/nepa/regs/nepa/nepaeqia.htm

1973 Endangered Species Act (as amended):
http://www.fws.gov/laws/lawsdigest/esact.html

1976 Federal Land Policy and Management Act (as amended):
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Federal Laws and Regulations Executive Order 13112 of February 3, 1999 – Invasive Species:
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http://www.dowagro.com/range/products/RemedyUltra.htm

Parker D., and M. H. Reiser. 1997 Low-Impact, Selective Herbicide Application for Control of African Rue. A preliminary Field Guide. United States Department of Agriculture, Forest Service Southwestern Region publication. 4 pp.

Sosebee, R. E. 1983. Physiological, phonological and environmental consideration in brush and weed control. In Proceedings of brush management symposium, ed. K. C. McDaniel 27-34. Denver, CO: Society for Range Management.

The Federal Land Policy and Management Act of 1976, as amended:
http://www.blm.gov/flpma/

Title 40 Code of Federal Regulations § 1500:
http://ceq.hss.doe.gov/nepa/regs/ceq/toc_ceq.htm

Title 40 Code of Federal Regulations § 81.337:
http://www.google.com/url?sa=t&source=web&cd=1&ved=0CCAQFjAA&url=http%3A%2F%2Fedocket.access.gpo.gov%2Fcfr_2009%2Fjulqtr%2Fpdf%2F40cfr81.337.pdf&ei=f22LTe_ABo-isAOqh5yJCg&usg=AFQjCNFHbbqO8ZtsBM3O2qiPcpipDRs5Xw

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http://www.access.gpo.gov/nara/cfr/waisidx_08/43cfr4700_08.html

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U.S. Department of the Interior. Bureau of Land Management, Special Status Species Management (Manual 6840): http://www.google.com/url?sa=t&source=web&cd=1&ved=0CBgQFjAA&url=http%3A%2F%2Fwww.blm.gov%2Fpgdata%2Fetc%2Fmedialib%2Fblm%2Fca%2Fpdf%2Fpdfs%2Fpa_pdfs%2Fbiology_pdfs.Par.9d22a8ee.File.dat%2F6840_ManualFinal.pdf&ei=MWeLTZGbF4-gsAOc1oCmCg&usg=AFQjCNFduaOsrXn3TsGTVcY8Uy3SmEvcoQ

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